

9	18	27	36	45	54
5' GCC CGA GCA CGC CGC GGA GCC CGG ACC TCC CTC GGA CGC TCT GCC CCG GCC ATG					M
63	72	81	90	99	108
GCG TCG CTG CTG CCA CTG CTC TGT CTC TGT GTC GTC GCG CAC CTG GCG GGG					
A S L L P L L C L C V A A H L A G					
117	126	135	144	153	162
GCC CGA GAC GCC ACC CCC ACC GAG GAG CCA ATG GCG ACT GCA CTG GGC CTG GAA					
A R D A T P T E E P M A T A L G L E					
171	180	189	198	207	216
AGA CGG TCC GTG TAC ACC GGC CAG CCC TCA CCA GCC CTG GAG GAC TGG GAA GAG					
R R S V Y T G Q P S P A L E D W E E					
225	234	243	252	261	270
GCC AGC GAG TGG ACG TCC TGG TTC AAC GTG GAC CAC CCC GGA GGC GAC GGC GAC					
A S E W T S W F N V D H P G G D G D					
279	288	297	306	315	324
TTC GAG AGC CTG GCT GCC ATC CGC TTC TAC TAC TAC GGG CCA GCG CGC GTG TGC CCG					
F E S L A A I R F Y Y G P A R V C P					
333	342	351	360	369	378
CGA CCG CTG GCG CTG GAG GCG CGC ACC ACG GAC TGG GCC CTG CCG TCC GCC GTC					
R P L A L E A R T T D W A L P S A V					

FIGURE 1A

387	396	405	414	423	432
GGC GAG CGC GTG CAC TTG AAC CCC ACG CGC GGC TTC TGG TGC CTC AAC CGC GAG					
G E R V H L N P T R G F W C L N R E					
441	450	459	468	477	486
CAA CCG CGT GGC CGC TGC TCC AAC TAC CAC GTG CGC TTC CGC TGC CCA CTA					
Q P R G R C S N Y H V R F R C P L					
495	504	513	522	531	540
GAA GCC TCG TGG GGC GCG TGG GGC CCG TGG GGT CCC TGC TCG GGC AGC TGT GGC					
E A S W G A W G P W G P C S G S C G					
549	558	567	576	585	594
CCA GGC CGT CGC TTG CGC GGC CAC TGC CCA AGC CCC GCT GGC GAT GCG TGT					
P G R R L R R R H C P S P A G D A C					
603	612	621	630	639	648
CCC GGC CGT CCT CTG GAG GCG CAG AAG TGC GTG CGG CCT CGG TGT CCA GGC TGC					
P G R P L E A Q K C V R P R C P G C					
657	666	675	684	693	702
AGC CTT GAC ACC TGT GAA TGC CCG GAC CAC ATC CTC CTG GGC TCG GTG GTC ACC					
S L D T C E C P D H I L L G S V T					
711	720	729	738	747	756
CCA TCT GGC CAA CCA CTG CTA GGA GCC AGG GTC TCC CTG CGA GAC CAG CCT GGC					
P S G Q P L L G A R V S L R D Q P G					

FIGURE 1B

765	774	783	792	801	810
ACT GTG GCC ACC AGC GAT GCT CAC GGA ACC TTC CGG GTG CCT GGT GTC TGT GCT					
T V A T S D A H G T F R V P G V C A					
819	828	837	846	855	864
GAC AGC CGC GCC AAC ATC AGG GCC CAG ATG GAT GGC TTC TCT GCA GGG GAG GCC					
D S R A N I R A Q M D G F S A G E A					
873	882	891	900	909	918
CAG GCC CAG GCC AAC GGA TCC ATC TCT GTG GTC ACC ATC ATC CTT GAT AAG TTG					
Q A Q A N G S I S V V T I I L D K L					
927	936	945	954	963	972
GAG AAG CCG TAC CTG GTG AAA CAC CCT GAG TCC CGA GTG CGA GAG GCT GGC CAG					
E K P Y L V K H P E S R V R E A G Q					
981	990	999	1008	1017	1026
AAT GTG ACT TTC TGC TGC AAA GCC TCC GGG ACC CCC ATG CCC AAG AAA TAC TCC					
N V T F C C K A S G T P M P K K Y S					
1035	1044	1053	1062	1071	1080
TGG TTC CAC AAT GGG ACC CTG CTG GAC AGG CGA GCT CAT GGG TAC GGG GCC CAC					
W F H N G T L L D R R A H G Y G A H					
1089	1098	1107	1116	1125	1134
CTG GAG CTS CGG GGA CTG CGC CCA GAC CAG GCT GGC ATC TAC CAC TGC AAG GCA					
L E L R G L R P D Q A G I Y H C K A					

FIGURE 1C

1143	1152	1161	1170	1179	1188
TGG AAT GAG GCG GGT GCC GTG CGC TCG GGC ACT GCC CGG CTC ACT GTA CTT GCC					
W N E A G A V R S G T A R L T V L A					
1197	1206	1215	1224	1233	1242
CCA GGC CAG CCA GCC TGC GAC CCC CGG CCC CGA GAG TAC CTG ATC AAG CTC CCT					
P G Q P A C D P R P R E Y L I K L P					
1251	1260	1269	1278	1287	1296
GAG GAC TGT GGT CAG CCA GGT AGT GGC CCT GCC TAC CTG GAT GTG GGC CTC TGT					
E D C G Q P G S G P A Y L D V G L C					
1305	1314	1323	1332	1341	1350
CCC GAC ACC CGC TGC CCC AGC CTG GCA GGC TCC AGC CCC CGC TGC GGC GAC GCC					
P D T R C P S L A G S S P R C G D A					
1359	1368	1377	1386	1395	1404
AGC TCC CGC TGC TGT TCT GTG CGC CGT CTG GAG AGA AGG GAG ATT CAC TGC CCT					
S S R C C S V R R L E R R E I H C P					
1413	1422	1431	1440	1449	1458
GGC TAC GTC CTC CCA GTG AAG GTG GCA GAG TGT GGC TGC CAG AAG TGT CTG					
G Y V L P V K V V A E C G C Q K C L					
1467	1476	1485	1494	1503	1512
CCC CCT CGG GGC CTG GTC CGG GGC CGT GTT GTG GCT GCT GAC TCC GGC GAG CCG					
P P R G L V R G R V V A A D S G E P					

FIGURE 1D

1521	1530	1539	1548	1557	1566
CTA CGC TTC GCC AGG ATT CTG CTG GGC CAG GAG CCC ATC GGC TTC ACC GCC TAC					
L R F A R I L L G Q E P I G F T A Y					
1575	1584	1593	1602	1611	1620
CAG GGC GAC TTT ACC ATT GAG GTG CCG CCC TCC ACC CAG CGG CTG GTG ACT					
Q G D F T I E V P P S T Q R L V T					
1629	1638	1647	1656	1665	1674
TTT GTG GAC CCC AGC GGT GAG TTC ATG GAC GCT GTC CGG GTC TTG CCT TTT GAT					
F V D P S G E F M D A V R V L P F D					
1683	1692	1701	1710	1719	1728
CCT CGA GGT GCC GTG TAC CAC GAG GTC AAG GCC ATG CGG AAG AAA GCC CCG					
P R G A G V Y H E V K A M R K K A P					
1737	1746	1755	1764	1773	1782
GTC ATT TTA CAT ACC AGC CAG AGC AAC ACG ATC CCC CTG GGC GAG CTG GAA GAT					
V I L H T S Q S N T I P L G E L E D					
1791	1800	1809	1818	1827	1836
GAG GCG CCC CTG GGC GAG CTG GTC CTG CCT TCT GGC GGT TTC CGC AGA GCC GAC					
E A P L G E L V L P S G A F R R A D					
1845	1854	1863	1872	1881	1890
GGC AAA CCC TAC TCG GGG CCT GTG GAG GCC CGG GTG ACG TTC GTG GAC CCC CGA					
G K P Y S G P V E A R V T F V D P R					

FIGURE 1E

1899	1908	1917	1926	1935	1944
GAC CTC ACC TCG GCG GCG TCT GCC CCC AGT GAC CTG CGC TTC GTG GAC AGC GAC					
D L T S A A S A P S D L R F V D S D					
1953	1962	1971	1980	1989	1998
GGC GAG CTG GCT CCA CTG CGC ACC TAC GGC ATG TTC TCC GTG GAC CTC CGT GCG					
G E L A P L R T Y G M F S V D L R A					
2007	2016	2025	2034	2043	2052
CCC GGC TCC GCG GAG CAG CTG CAG GTG GGG CCG GTG GCC GTG GCG GCC GCC					
P G S A E Q L Q V G P V A V R V A A					
2061	2070	2079	2088	2097	2106
AGC CAG ATC CAC ATG CCA GGC CAC GTG GAG GCC CTC AAG CTG TGG TCG CTG AAC					
S Q I H M P G H V E A L K L W S L N					
2115	2124	2133	2142	2151	2160
CCC GAG ACC GGC TTG TGG GAG GAG GAG AGC GGC TTC CGG CGC GAG GGG TCC TCG					
P E T G L W E E E S G F R R E G S S					
2169	2178	2187	2196	2205	2214
GGC CCC CGG GTG CGC CGG GAG GAG GAG GTC TTC CTG GTG GGC AAC GTG GAG ATC					
G P R V R R E E E R V F L V G N V E I					
2223	2232	2241	2250	2259	2268
CGG GAG CGG CGC CTG TTC AAT CTG GAC GTG CCT GAG CGC CGC CGC TGC TTC GTG					
R E R R L F N L D V P E R R R C F V					

FIGURE 1F

2277	2286	2295	2304	2313	2322
AAG GTG CGC GCC TAC GCC AAC GAC AAG TTC ACC CCC AGC GAG CAG GTG GAG GGC					
K V R A Y A N D K F T P S E Q V E G					
2331	2340	2349	2358	2367	2376
GTG GTG GTC ACG CTG GTC AAT CTG GAG CCC GCC CCC GGC TTC TCC GCC AAC CCC					
V V V T L V N L E P A P G F S A N P					
2385	2394	2403	2412	2421	2430
CGT GCC TGG GGC CGC TTT GAC AGC GCG GTC ACC GGC CCC AAT GGC GCC TGC CTC					
R A W G R F D S A V T G P N G A C L					
2439	2448	2457	2466	2475	2484
CCC GCC TTC TGC GAC GCC GAC AGG CCA GAC GCC TAC ACC GCC CTG GTG ACC GCC					
P A F C D A D R P D A Y T A L V T A					
2493	2502	2511	2520	2529	2538
ACC CTG GGC GGC GAG GAG CTG GAG CCG GCC CCT TCC TTG CCC CGC CCA CTC CCG					
T L G G E E L E P A P S L P R P L P					
2547	2556	2565	2574	2583	2592
GCC ACC GTG GGC GTC ACC CAG CCC TAC CTG GAC AGG CTG GGC TAC CGT CGG ACG					
A T V G V T Q P Y L D R L G Y R R T					
2601	2610	2619	2628	2637	2646
GAC CAC GAC GAT CCC GCC TTC AAG CGT AAC GGC TTC CGC ATC AAC CTC GCC AAG					
D H D D P A F K R N G F R I N L A K					

FIGURE 1G

FIGURE 1H

3033	3042	3051	3060	3069	3078
GAG TTC AAG TGC AGC GGG ATG CTG TTC GAC CAG CGG CAG GTG GAC AGG ACG CTG					
E F K C S G M L F D Q R Q V D R T L					
3087	3096	3105	3114	3123	3132
GTG ACC ATT ATG CCC CAG GGC AGC TGC CGG CGC GTG GCC GTC AAC GGA CTC CTT					
V T I M P Q G S C R R V A V N G L L					
3141	3150	3159	3168	3177	3186
CGG GAT TAC CTG ACC CGG CAC CCC CCA CCG GTG CCC GCG GAG GAC CCA GCT GCC					
R D Y L T R H P P P V P A E D P A A					
3195	3204	3213	3222	3231	3240
TTC TCC ATG CTG GCC CCC CTA GAC CCT CTG GGC CAC AAC TAT GGC GTC TAC ACT					
F S M L A P L D P L G H N Y G V Y T					
3249	3258	3267	3276	3285	3294
GTC ACT GAC CAG AGC CCA CGC TTG GCC AAG GAG ATC GCC ATT GGC CGC TGC TTT					
V T D Q S P R L A K E I A I G R C F					
3303	3312	3321	3330	3339	3348
GAT GGT TCC TCT GAC GGY TTC TCC AGA GAG ATG AAG GCT GAT GCC GGC ACA GCC					
D G S S D G G F S R E M K A D A G T A					
3357	3366	3375	3384	3393	3402
GTC ACC TTC CAG TGC CGG GAG CCA CCG GCC GGA CGA CCC AGC CTC TTC CAG AGG					
V T F Q C R E P P A G R P S L F Q R					

FIGURE 11

[illegible]

FIGURE 1J

3843	3852	3861	3870	3879	3888
TTT GAC CCT GAT TTC AAT CTT CTA CCC TTG GGA GTT CTG GCG TTT GGC ACA AAG					
3897	3906	3915	3924	3933	3942
TCC CCT CTG CCT GTT TGG AGC TCA GTG CTA GAC CAG GTC CCC TGC CCC GAG CTT					
3951	3960	3969	3978	3987	3996
TGT TTT TGG GGT TAT TTA TTG AAA CAA AGT GTG GGG AGC TGG TTG TGG GTG TGA					
4005	4014	4023	4032	4041	4050
GTG GGG GTG TGG GGT CCA GGC TGG GCC CAG TGA AAA GGA GGA AGG GGT TCC CAT					
V G V W G P G W A Q					
4059	4068	4077	4086	4095	4104
GCG GGG GAG GCT CTG GGG CTG AGG GGA ACA ATT CTC ACG TGT TTG GTG CTT AGA					
4113	4122	4131	4140	4149	4158
GAC CTG CCC GGG GCG TTG GGC AGG CCC TCC GGG GGC TGA ATT AAA AAT GCT TTA					
4167	4176				
TTT CCA AAA AAA AAA AAA AAA NAA A 3'					

FIGURE 1K

1	MAS	- - - -	LLPL	LLCL	CVVA	AHLA	GARD	ATPT	EEPM	ATAL	GL	NTPPH-2
1	MVG	TKAW	VFSF	VLVL	- EV	TSVL	G - -	RQ	TMLT	QSVR	VQPCK	NTPPH-1
37	ERR	SVYT	GQPS	PALE	DWEE	EA	SEWT	SWFN	VVDH	PGGD	GDFFES	NTPPH-2
38	KNP	SIFA	- KPA	DLE	- - -	SPGE	WT	TWFI	IDY	PGGK	GDYER	NTPPH-1
77	LAA	IRFY	YGPA	RVCP	RRPL	AL	EA	RTT	DWAL	PSAV	GERVHLN	NTPPH-2
74	LDA	IRFY	YG -	DRVC	ARRP	LR	LE	ARTT	DWTP	AGST	CGQVHGS	NTPPH-1
117	PTR	GF	WCLN	RE	QPR	GRRC	SNYH	VFRCP	- - - -	- - - -	LEASW	NTPPH-2
113	PRE	GF	WCLN	RE	QPR	GNCS	NYTV	RFLCP	PGSL	RRDT	TERIW	NTPPH-1
150	GAW	GPWG	PCSG	SCGP	- GR	RRRR	HCPS	PAGDA	CPGR	PLEA		NTPPH-2
153	SPW	SPWS	KCSA	ACGQ	TGV	QTR	TRIC	LAEM	VSLC	SEASE	EG	NTPPH-1
189	QKC	VRPR	CPGC	SL -	- - - -	- - - -	- - - -	- - - -	DTCE	CPDH	ILLGSVVT	NTPPH-2
193	QHC	MGQD	CTAC	DL	TC	PMGQ	VNAD	CDAC	MCQD	FMLH	GAVSL	NTPPH-1
218	PSG	OPLL	GARV	SLRD	Q -	PG	TVAT	SDAH	GTFR	VPGV	CADSR	NTPPH-2
233	PGG	APAS	GA	AIYL	LTKT	PK	LLTQ	TDSD	GRFR	IPGL	CPDGK	NTPPH-1
257	ANI	RAQM	DGFS	A -	GE	AOAQ	ANGS	ISVV	TIIL	DKLE	KPYLV	NTPPH-2
273	SIL	KITK	VKEF	APIV	LTM	PKTS	LKAA	TIKA	EFVR	AE	TPYMV	NTPPH-1
296	KHP	ESRV	REAG	QNV	TF	CC	KASG	TPMP	KKYS	SWFH	NGTLLDR	NTPPH-2
313	MNP	ETK	ARRA	GO	SV	SL	CC	KA	TG	KPRP	DKYFWYHND	NTPPH-1
336	RAH	GYGA	HL	EL	RGL	RP	DQ	AGIY	HCKA	WNEA	GAVRS	NTPPH-2
353	SLY	KHES	KL	VL	RKL	LQ	QH	QAG	EYF	CKAQ	SDAGAVKSKVAQL	NTPPH-1

FIGURE 2A

376	T	V	L	A	P	G	O	P	A	C	D	P	R	P	R	E	Y	L	I	K	L	P	E	D	C	G	Q	P	G	S	G	P	A	Y	L	D	V	G	L	C	NIPPH-2
393	I	V	I	A	S	D	E	T	P	C	N	P	V	P	E	S	Y	L	I	R	L	P	H	D	C	F	Q	N	A	T	N	S	F	Y	Y	D	V	G	R	C	NIPPH-1
416	P	D	T	R	C	P	S	L	A	G	S	S	P	R	C	G	D	A	S	S	R	C	C	S	V	R	R	L	E	R	R	E	I	H	C	P	G	Y	V	L	NIPPH-2
433	P	V	K	T	C	A	G	Q	Q	D	N	G	I	R	C	R	D	A	V	Q	N	C	C	G	I	S	K	T	E	E	R	E	I	Q	C	S	G	Y	T	L	NIPPH-1
456	P	V	K	V	V	A	E	C	G	C	Q	K	C	L	P	P	R	G	L	V	R	G	R	V	V	A	A	D	S	G	E	P	L	R	F	A	R	I	L	L	NIPPH-2
473	P	T	K	V	A	K	E	C	S	C	Q	R	C	T	E	T	R	S	I	V	R	G	R	V	S	A	A	D	N	G	E	P	M	R	F	G	H	V	Y	M	NIPPH-1
496	G	O	E	P	I	G	F	T	A	Y	Q	G	D	F	T	I	E	V	P	P	S	T	Q	R	L	V	V	T	F	V	D	P	S	G	E	F	M	D	A	V	NIPPH-2
513	G	N	S	R	V	S	M	T	G	Y	K	G	T	F	T	L	H	V	P	Q	D	T	E	R	L	V	L	T	F	V	D	R	L	Q	K	F	V	N	T	NIPPH-1	
536	R	V	L	P	F	D	P	R	G	A	G	V	Y	H	E	V	K	A	M	R	K	K	A	P	V	I	L	H	T	S	Q	S	N	T	I	P	L	G	E	L	NIPPH-2
553	K	V	L	P	F	N	K	K	G	S	A	V	F	H	E	I	K	M	L	C	R	K	E	P	I	T	L	E	A	M	E	T	N	I	I	P	L	G	E	V	NIPPH-1
576	E	D	E	A	P	L	G	E	L	V	L	P	S	G	A	F	R	R	A	D	G	K	P	Y	S	G	P	V	E	A	R	V	T	F	V	D	P	R	D	L	NIPPH-2
593	V	G	E	D	P	M	A	E	L	E	I	P	S	R	S	F	Y	R	Q	N	G	E	P	Y	I	G	K	V	K	A	S	V	T	F	L	D	P	R	N	I	NIPPH-1
616	T	S	A	A	S	A	P	S	D	L	R	F	V	D	S	D	G	E	L	A	P	L	R	T	Y	G	M	F	S	V	D	L	R	A	P	G	S	A	E	O	NIPPH-2
633	S	T	A	T	A	Q	T	D	L	N	F	I	N	D	E	G	D	T	F	P	L	R	T	Y	G	M	F	S	V	D	F	R	D	E	V	T	S	E	P	NIPPH-1	
656	L	Q	V	G	P	V	A	V	R	V	A	A	S	Q	I	H	M	P	G	H	V	E	A	L	K	L	W	S	L	N	P	E	T	G	L	W	E	E	E	S	NIPPH-2
673	L	N	A	G	K	V	K	V	H	L	D	S	T	Q	V	K	M	P	E	H	I	S	T	V	K	L	W	S	L	N	P	D	T	G	L	W	E	E	E	G	NIPPH-1
696	G	F	R	R	E	G	S	S	G	P	R	V	R	R	E	E	R	V	F	L	V	G	N	V	E	I	R	E	R	R	L	F	N	L	D	V	P	E	R	R	NIPPH-2
713	D	F	K	F	E	-	-	N	Q	R	R	N	K	R	E	D	R	T	F	L	V	G	N	L	E	I	R	E	R	R	L	F	N	L	D	V	P	E	S	R	NIPPH-1
736	R	C	F	V	K	V	R	A	Y	A	N	D	K	F	T	P	S	E	Q	V	E	G	V	V	T	L	V	N	L	E	P	A	P	G	F	S	A	N	P	NIPPH-2	
751	R	C	F	V	K	V	R	A	Y	R	S	E	R	F	L	P	S	E	Q	I	Q	G	V	V	I	S	V	I	N	L	E	P	R	T	G	F	L	S	N	P	NIPPH-1

FIGURE 2B

776	R A W G R F D S A V T G P N G A C L P A F C D A D R P D A Y T A L V T A T L G G	NTPPH-2
791	R A W G R F D S V I T G P N G A C V P A F C D D Q S P D A Y S A Y V L A S L A G	NTPPH-1
816	E E L E P A P S L P R P L P A T V G V T Q P Y L D R L G Y R R T D H D D P A F K	NTPPH-2
831	E E L Q A V E S S P K F N P N A I G V P Q P Y L N K L N Y R R T D H E D P R V K	NTPPH-1
856	R N G F R I N L A K P R P G D P A E A N G P V Y P W R S L R E C Q G A P V T A S	NTPPH-2
871	K T A F Q I S M A K P R P N S A E E S N G P I Y A F E N L R A C E E A P P S A A	NTPPH-1
896	H F R F A R V E A D K Y E Y N V V P F R E G T P A S W T G D L L A W W P N P O E	NTPPH-2
911	H F R F Y Q I E G D R Y D Y N T V P F N E D D P M S W T E D Y L A W W P K P M E	NTPPH-1
936	F R A C F L K V K I Q G P O E Y M V R S H N A G G S H P R T R G O L Y G L R D A	NTPPH-2
951	F R A C Y I K V K I V G P L E V N V R S R N M G G T H R R T V G K L Y G I R D V	NTPPH-1
976	R S V R D P E R P G T S A A C V E F K C S G M L F D Q R Q V D R T L V T I M P Q	NTPPH-2
991	R S T R D R D Q P N V S A A C L E F K C S G M L Y D Q D R V D R T L V K V I P Q	NTPPH-1
1016	G S C R R V A V N G L L R D Y L T R H P P V P P A E D P A A F S M L A P L D P L	NTPPH-2
1031	G S C R R A S V N P M L H E Y L V N H L P L A V N N D T S E Y T M L A P L D P L	NTPPH-1
1056	G H N Y G V Y T V T D Q S P R L A K E I A I G R C F D G S S D G F S R E M K A D	NTPPH-2
1071	G H N Y G I Y T V T D Q D P R T A K E I A L G R C F D G T S D G S S R I M K S N	NTPPH-1
1096	A G T A V T F Q C R E P P A G R P S L F Q R L L E S P A - - T A L G D I R - - -	NTPPH-2
1111	V G V A L T F N C V E R Q V G R Q S A F Q Y L Q S T P A Q S P A A G T V Q G R V	NTPPH-1
1131	- - - R E M S E A A Q A Q A R A S G P L - - - - - R T R R G R V R Q	NTPPH-2
1151	P S R R Q Q R A S R G G Q R Q S G V V A S L R F F P R V A Q Q P L I N	NTPPH-1

FIGURE 2C

FIGURE 3A



①